



# State of Utah

## DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER QUALITY

Michael O. Leavitt  
Governor

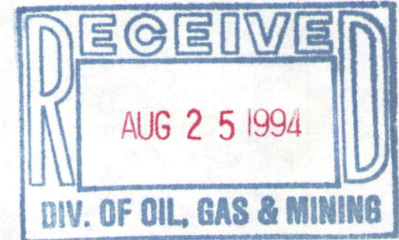
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August 22, 1994

Mr. Glen Eurick  
Environmental Affairs Coordinator  
Barrick Mercur Gold Mine  
P.O. Box 838  
Tooele, Utah 84074



Re: Permit No. UGW450001 - Exceedence of  
Compliance Limits at Monitoring Well MW-  
13: Notice of Intent to Reopen or Renew  
Permit for Update of Background and  
Compliance Levels

Dear Mr. Eurick:

We are in receipt of the water quality analyses submitted to our office attached to a July 15, 1994 letter from Dave Beatty. The results for monitoring well MW-13 were in excess of compliance levels for both TDS and Nitrate. The data from the previous four samples collected during the respective monitoring periods also indicate that compliance levels for TDS have been in excess of the permit compliance level of 2093 mg/l. Because the protection levels and compliance limits were only recently calculated based on the accelerated monitoring data from August 8, 1992, for MW-13 (see letter to Dames & Moore dated July 18, 1994) this non-compliance has only recently become evident.

Now that the above information has come to light Barrick should "Immediately implement an accelerated schedule of monthly ground water monitoring which shall continue for at least two months or until the facility is brought into compliance." (See Part I.F.2.a.2) Further Barrick should submit a Source and Contamination Study Plan within 30 days of receipt of this letter. See Part I.F.2.b for permit conditions relating to this requirement.

This letter should also serve as notice of our intent to reopen this permit for modification in accordance with the reopener provision of Part IV.N.2. The letter to Dames and Moore dated July 18, 1994 lists the background, protection and compliance levels we have determined for this permit reopener. Barrick is currently required under this permit to reapply by January 10, 1995 for renewal of this permit set to expire on July 10, 1995. Rather than modifying this permit during the next couple of months and then reissuing it again next July, we propose to simply reissue this permit for 5 years while it is reopened for modification. If you concur with this proposal please submit a letter requesting permit renewal within 30 days of your receipt of this letter. At that point we can make the appropriate public notice for renewal instead of modification.

The above out-of-compliance issue and permit renewal issues were discussed with you at a meeting in our office on August 4, 1994. At that time you were in agreement with the course of action outlined above. At that meeting you were provided with a package of statistical and graphical analysis of the monitoring data concerning MW-13.



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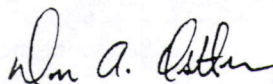
The basis for determining the out-of-compliance at MW-13 for TDS as shown within that package is two fold. Based on these two ways of interpreting the TDS data at MW-13 we have determined that an out-of-compliance situation now exists. First of all the TDS monitoring data for the past five monitoring periods were compared to the compliance level determined for TDS at MW-13 of 2093 mg/l. All past five monitoring results are in excess of that value. The second basis was the determination of the cumulative sum for the TDS compliance data since August 8, 1992. This was done to satisfy the requirement of Part I.E.1 of the permit which stipulated that control charts will be used to evaluate compliance monitoring data.

The control chart analysis we performed is based on the methodology described in the EPA document entitled "Statistical Analysis of Ground Water Monitoring at RCRA facilities, February, 1989. That reference dictates that a well is statistically out-of-control when the calculated cumulative sum is greater than 4.5 standardized concentration units. Without adjusting for any potential seasonality a cumulative sum of 9.5 was calculated. Using two different scenarios to account for any potential seasonality values of greater than ten were calculated. The previously unprecedented occurrence of nitrate at MW-13 at a level of 4.48 mg/l in MW-13 gives us further concern about the potential degradation of water quality occurring at the site. The protection level of nitrate was determined to be 2.5 mg/l based on 25% of the ground water quality standard. Because we recognize that the latest monitoring result may be due to lab or sampling error, we are looking forward to the next round of analysis results to either confirm the presence of elevated nitrate levels or demonstrate that the last result was indeed an error.

If you have any questions concerning our interpretation of your monitoring data please contact Dennis Frederick at 538-6146.

Sincerely,

Utah Water Quality Board



Don A. Ostler, P.E.  
Executive Secretary

Enclosure

DAO:DAF:wfm

cc: Utah County Health Department  
Tooele County Health Department  
J.B.Brown, Dames and Moore  
Wayne Hedberg, DOGM